

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A time-domain pulsed spectroscopy apparatus comprising:
a pulsed laser light source;
a splitting unit configured to split pulsed laser light from the pulsed laser light source into excitation pulsed laser light and detection pulsed laser light;
a pulsed-light emitting unit configured to emit pulsed light including wavelengths in the far-infrared wavelength region due to irradiation of the excitation pulsed laser;
a detector configured to detect a wave form signal of the electric field intensity of reflected or transmitted pulsed light from the sample onto which the pulsed light from the pulsed-light emitting unit is radiated;
a sample holder configured to hold the sample; and
sample-unit entrance and exit optical systems configured to guide the pulsed light from the pulsed-light emitting unit to the sample and to guide to the detector pulsed light reflected from or transmitted through the sample due to the irradiation,
wherein the time-domain pulsed spectroscopy apparatus further comprises:
at least one optical-path-length varying unit ~~for setting a photometric range~~, disposed in an incident-side optical path from the splitting unit to the pulsed-light emitting unit and/or in a detection-side optical path from the splitting unit to the detector; ~~and~~
~~at least one optical delay unit for the wave form signal measurement, disposed in the incident-side optical path from the splitting unit to the pulsed-light emitting unit and/or in the detection-side optical path from the splitting unit to the detector~~
wherein the optical-path-length varying unit for setting a photometric range is a reflector that is either moveable or fixed; and,
said reflector includes, at the incident side of the pulsed light to the reflector, a gate member configured to pass or block the pulsed light to the reflector by blocking to add an optical path via the reflector to extend the optical path length or passing to skip the reflector to shorten the optical path length.

2. (Previously presented) A time-domain pulsed spectroscopy apparatus according to Claim 1, wherein the optical-path-length varying unit for setting a photometric range is a movable reflector.

3. Cancelled.

4. (Currently Amended) A time-domain pulsed spectroscopy apparatus according to Claim ~~[[3]]~~ 1, wherein passing or blocking of at least one of the gate members is performed by inserting and removing the gate member, by translational motion, into and from the optical path.

5. (Currently Amended) A time-domain pulsed spectroscopy apparatus according to Claim ~~[[3]]~~ 1, wherein passing or blocking of at least one of the gate members is performed by inserting and removing the gate member, by rotation, into and from the optical path.

6. (Currently Amended) A time-domain pulsed spectroscopy apparatus according to ~~one of Claims 1 to 5~~ 1, 2, 4, or 5, further comprising: a driving device configured to automatically scan the optical-path-length varying unit and/or the optical delay unit; and a computer control apparatus configured to automatically control the driving device.

7. (Previously presented) A time-domain pulsed spectroscopy apparatus according to Claim 1, wherein the sample holder and the sample-unit entrance and exit optical systems are provided inside an auxiliary optical unit that can be attached to and removed from the time-domain pulsed spectroscopy apparatus to enable replacement thereof.

8. (Original) A time-domain pulsed spectroscopy apparatus according to Claim 7 having an optical design that provides optical alignment with respect to the auxiliary optical unit.

9. Cancelled.

10. (Previously Presented) A time-domain pulsed spectroscopy apparatus according to Claim 1 wherein, in the time-domain pulsed spectroscopy apparatus comprising:

a pulsed laser light source;

a splitting unit configured to split pulsed laser light from the pulsed laser light source into excitation pulsed laser light and detection pulsed laser light;

a pulsed-light emitting unit configured to emit pulsed light including wavelengths in the far-infrared wavelength region due to irradiation of the excitation pulsed laser;

a detector configured to detect a wave form signal of the electric field intensity of reflected or transmitted pulsed light from the sample onto which the pulsed light from the pulsed-light emitting unit is radiated;

a sample holder configured to hold the sample; and

sample-unit entrance and exit optical systems configured to guide the pulsed light from the pulsed-light emitting unit to the sample and to guide to the detector pulsed light reflected from or transmitted through the sample due to the irradiation,

from the pulsed-light emitting unit to the sample-unit entrance and exit optical systems and/or from the detector to the sample-unit entrance and exit optical systems, one or a plurality of planar mirrors and one or a plurality of aspherical mirrors are disposed in this order.